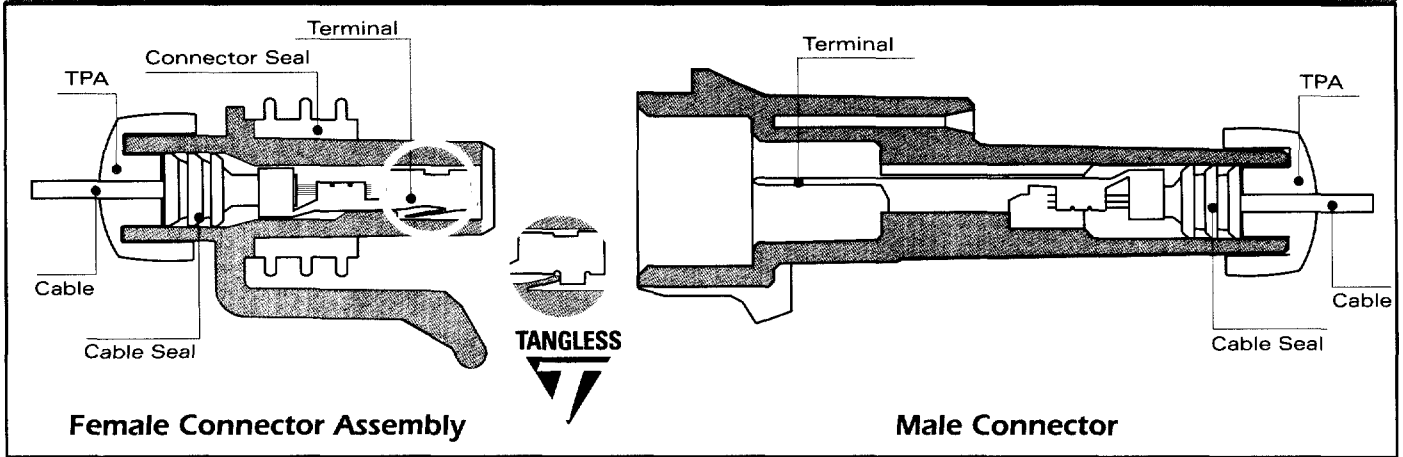




Cross Sectional View



TANGLESS

280 TANGLESS FEMALE TERMINALS SEALED

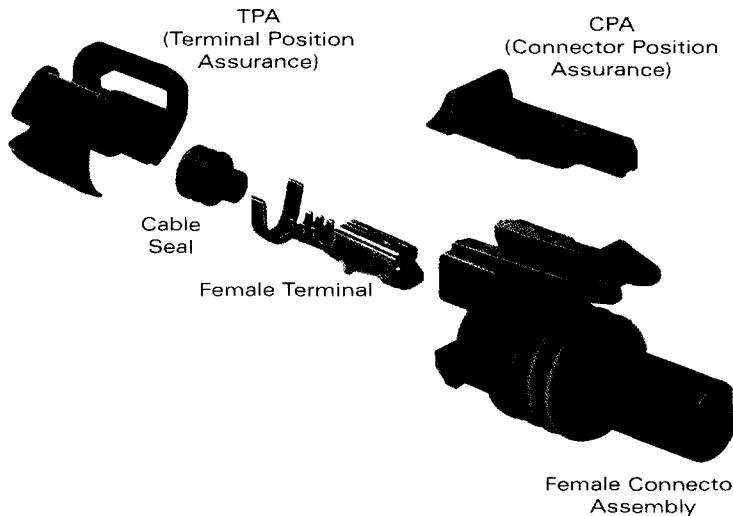
Part #	Cable Range (mm ²)	Material	Plating
12110853	5.0-3.0	Tin Brass	Tin
12129409	2.0-1.0	Tin Brass	Tin
12110845*	3.0-2.0	Tin Brass	Tin
12110847*	1.0-0.80	Tin Brass	Tin
12110846*	0.50-0.35	Tin Brass	Tin

*Thin Stock—Electrical current restrictions apply, contact your regional support representative at the number listed below.

TANGLESS

280 FLEXLOCK FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
7	12110751	Black	PA66 HS IM	12110754
15	12161186	Black	PA66 HS IM	12176865



280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm ²)	Material	Plating
12077413	5.0	Tin Brass	Tin
12129493	3.0-2.0	Tin Brass	Tin
12077411	1.0-0.80	Tin Brass	Tin
12084201	0.50-0.35	Tin Brass	Tin
12176387	5.0	Beryllium Copper	Silver/Nickel
12176388	3.0-2.0	Beryllium Copper	Silver/Nickel
12176389	1.0-0.80	Beryllium Copper	Silver/Nickel

280 FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
1	12065172	Black	PA66 HS IM	12065249
2	15300027	Black	PA66 HS IM	15300014
2	12124819	Black	PBT	12020807
3	12040977	Black	PA66 HS IM	12034145
4	12129565	Md. Gray	PA66 HS IM	15300016
5	12084891	Md. Gray	PA66 HS IM	15300017

280.1 FEMALE PULL-TO-SEAT TERMINALS SEALED

Part #	Cable Range (mm ²)	Material	Plating
12077939	1.0-0.80	Silicon Bronze	Tin
12103360	0.50-0.35	Silicon Bronze	Tin

280 METRI-PACK CABLE SEALS

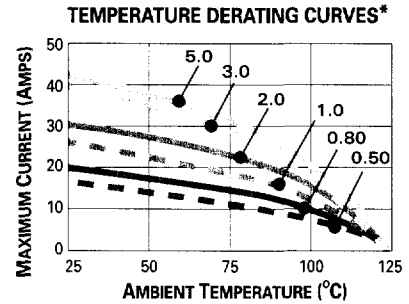
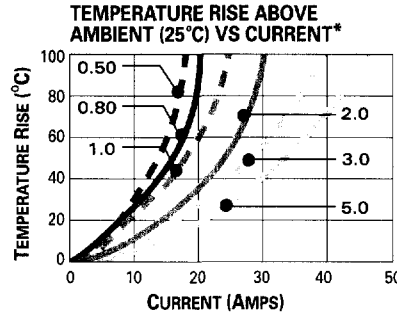
Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red



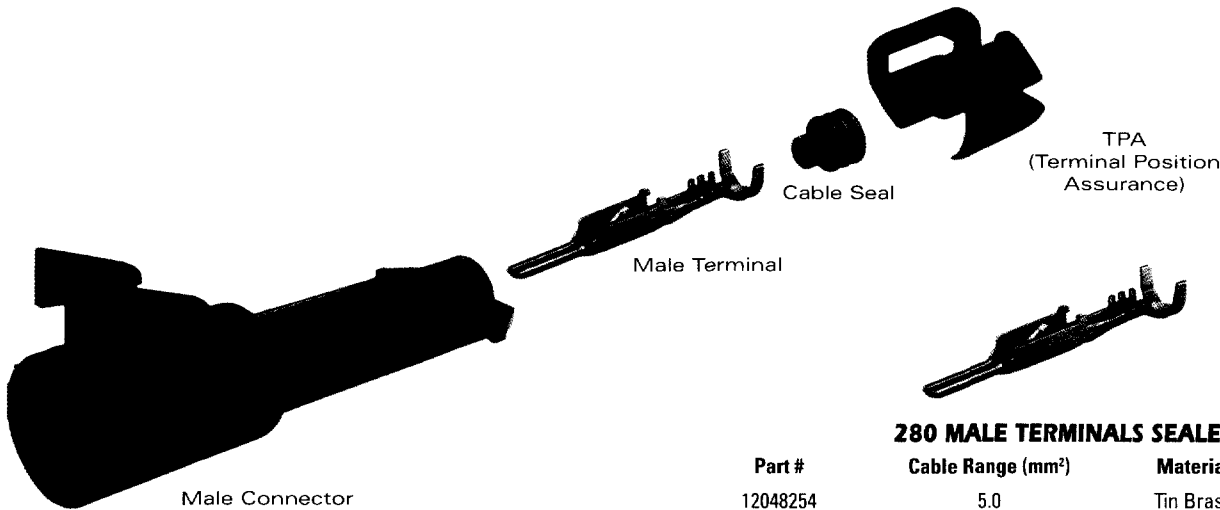
Sealed System Application Information

280 SERIES TERMINALS - Tin Plated

CABLE RANGE (mm²): 0.35-5.0
 CURRENT RANGE (AMPS): 0-30
 TEMP RANGE °C: -40 to 125
 RESISTANCE: <10mΩ@20mV
 VOLTAGE DROP: <3.0mV/amp
 CENTERLINE SPACING (mm): 7.7
 BLADE WIDTH (mm): 2.8



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



280 MALE TERMINALS SEALED

Part #	Cable Range (mm ²)	Material	Plating
12048254	5.0	Tin Brass	Tin
12129497	3.0-2.0	Tin Brass	Tin
12048159	1.0-0.80	Tin Brass	Tin
12124977	0.50-0.35	Tin Brass	Tin

280 MALE CONNECTORS SEALED

# Cavities	Connector	Color	Material	TPA
1	12065171	Black	PA66 HS IM	12065249
2	15300002	Black	PA66 HS IM	15300014
2	12059450	Black	PA66 HS IM	12065279
3	15300003	Black	PA66 HS IM	15300015
4	12129600	Dk. Gray	PBT 30% GF	12092733
5	12186400	Gray	PBT 30% GF	12084673
7	12110753	Black	PA66 HS IM	12110754
15	12161187	Black	PA66 HS IM	12110782

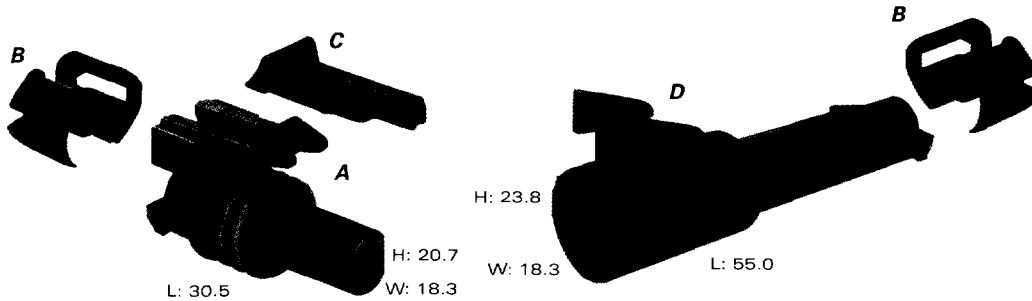
280 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

- Contact your regional support representative at the number listed below.
- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female Connections for device applications, see page 92.



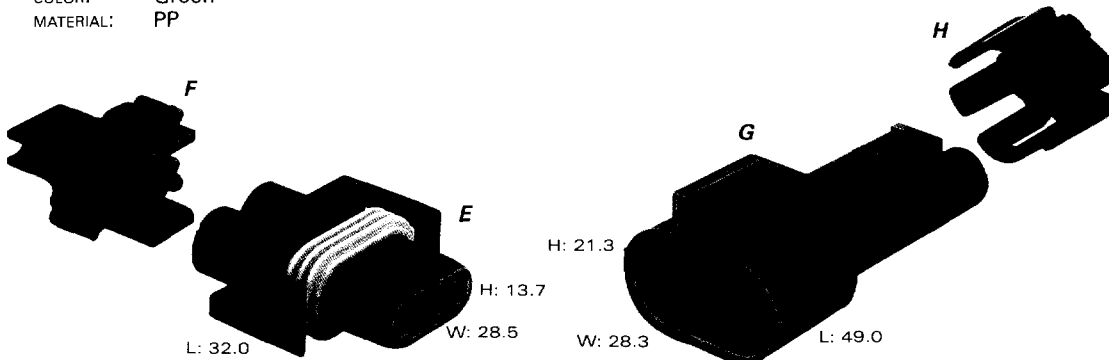
Total Mated Length: 70.3mm

A PART NO: 12065172
 DESCRIPTION: Connector Assembly 1F
 SIZE: 30.5L x 20.7H x 18.3W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

D PART NO: 12065171
 DESCRIPTION: Connector 1M
 SIZE: 55.0L x 23.8H x 18.3W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

B PART NO: 12065249
 DESCRIPTION: TPA
 NUMBER REQ.: 2
 COLOR: Black
 MATERIAL: PA66 HS IM

C PART NO: 12052834
 DESCRIPTION: CPA
 COLOR: Green
 MATERIAL: PP



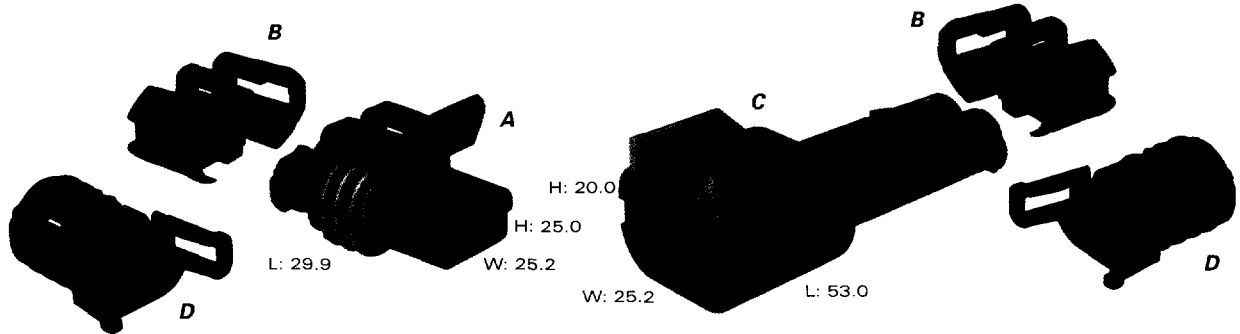
Total Mated Length: 81.9mm

E PART NO: 12124819
 DESCRIPTION: Connector Assembly 2F
 SIZE: 32.0L x 13.7H x 28.5W
 COLOR: Black
 MATERIAL: PBT
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

G PART NO: 12059450
 DESCRIPTION: Connector 2M (Clip Slot)
 SIZE: 49.0L x 21.3H x 28.3W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

F PART NO: 12020807
 DESCRIPTION: TPA
 COLOR: Md. Gray
 MATERIAL: PA6

H PART NO: 12065279
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6



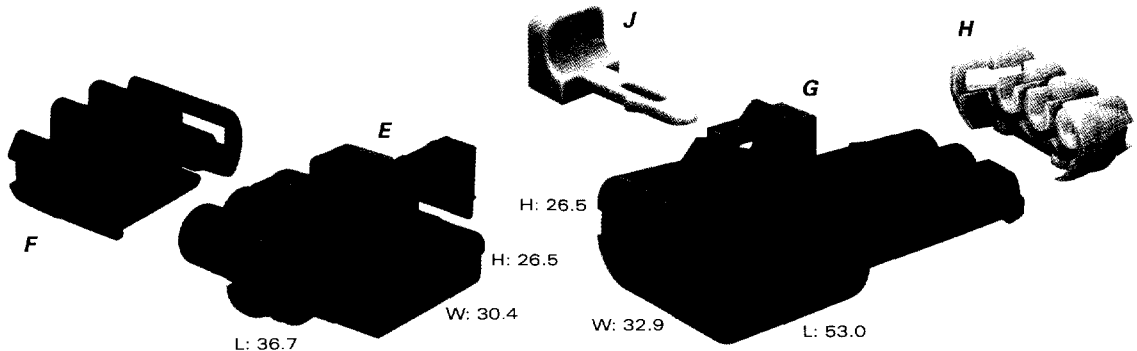
Total Mated Length: 66.8mm

A PART NO: 15300027
 DESCRIPTION: Connector Assembly 2F
 SIZE: 29.9L x 25.0H x 25.2W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

C PART NO: 15300002
 DESCRIPTION: Connector 2M
 SIZE: 53.0L x 20.0H x 25.2W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

B PART NO: 15300014
 DESCRIPTION: TPA
 NUMBER REQ.: 2
 COLOR: Blue
 MATERIAL: PA6

D PART NO: 15327747 (Optional)
 DESCRIPTION: Conduit TPA
 NUMBER REQ.: 2
 COLOR: Black
 MATERIAL: PA6



Total Mated Length: 76.1mm

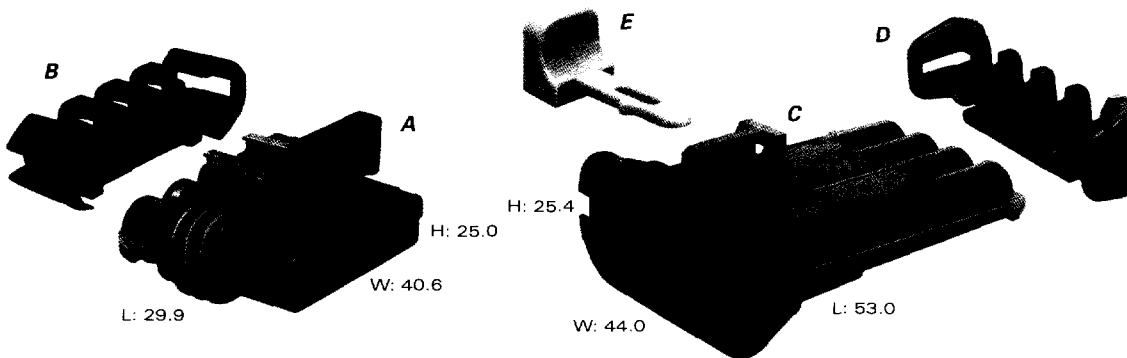
E PART NO: 12040977
 DESCRIPTION: Connector Assembly 3F
 SIZE: 36.7L x 26.5H x 30.4W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

G PART NO: 15300003
 DESCRIPTION: Connector 3M (Clip Slot)
 SIZE: 53.0L x 26.5H x 32.9W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

F PART NO: 12034145
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6

H PART NO: 15300015
 DESCRIPTION: TPA
 COLOR: Natural
 MATERIAL: PA6

J PART NO: 12020833
 DESCRIPTION: CPA
 COLOR: Gray
 MATERIAL: PBT



Total Mated Length: 66.7mm

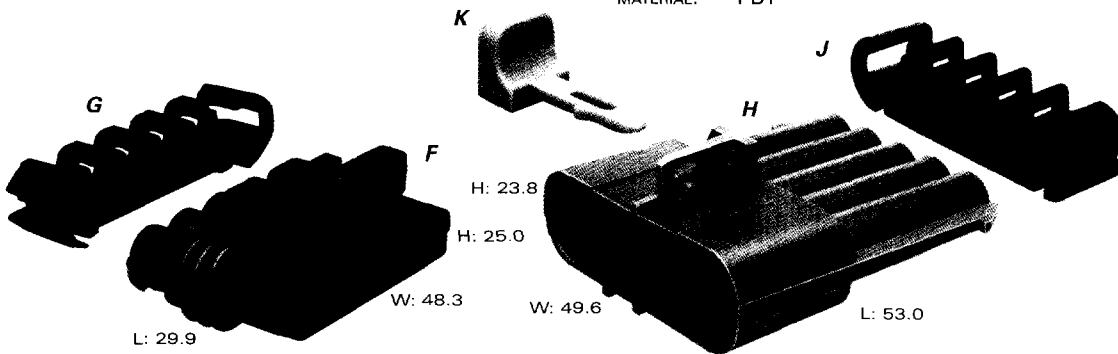
A PART NO: 12129565
 DESCRIPTION: Connector Assembly 4F
 SIZE: 29.9L x 25.0H x 40.6W
 COLOR: Md. Gray
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

C PART NO: 12129600
 DESCRIPTION: Connector 4M (Clip Slot-Self Locking)
 SIZE: 53.0L x 25.4H x 44.0W
 COLOR: Dk. Gray
 MATERIAL: PBT 30% GF
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

B PART NO: 15300016
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6

D PART NO: 12092733
 DESCRIPTION: TPA
 COLOR: Blue
 MATERIAL: PA6

E PART NO: 12020833
 DESCRIPTION: CPA
 COLOR: Gray
 MATERIAL: PBT



Total Mated Length: 67.3mm

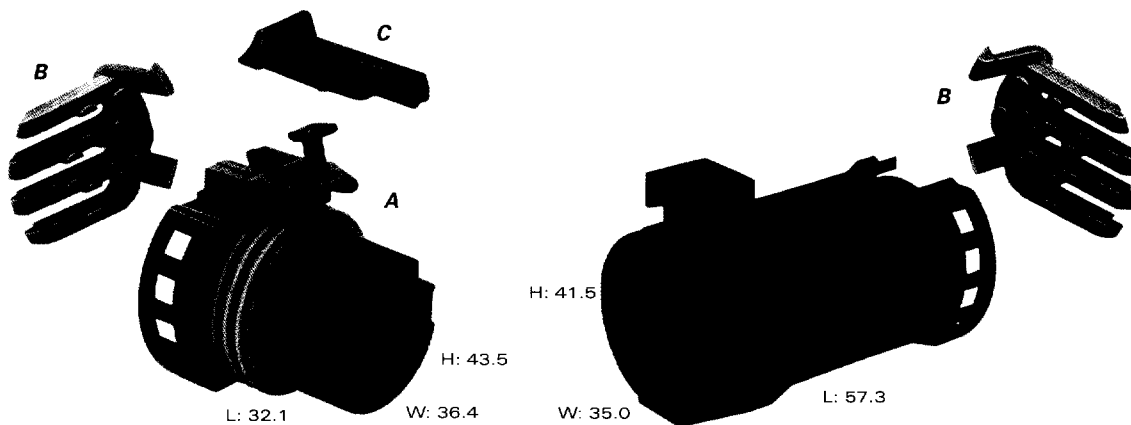
F PART NO: 12084891
 DESCRIPTION: Connector Assembly 5F
 SIZE: 29.9L x 25.0H x 48.3W
 COLOR: Md. Gray
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

H PART NO: 12186400
 DESCRIPTION: Connector 5M (Clip Slot-Self Locking)
 SIZE: 53.0L x 23.8H x 49.6W
 COLOR: Gray
 MATERIAL: PBT 30% GF
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

G PART NO: 15300017
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6

J PART NO: 12084673
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6

K PART NO: 12020833
 DESCRIPTION: CPA
 COLOR: Gray
 MATERIAL: PBT



Total Mated Length: 77.3mm



A PART NO: 12110751 (Black)
12129613 (Md. Gray)
12146841 (Natural)

DESCRIPTION: Connector Assembly 7F
SIZE: 32.1L x 43.5H x 36.4W
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

D PART NO: 12110753 (Black)
12129614 (Md. Gray)
12146840 (Natural)

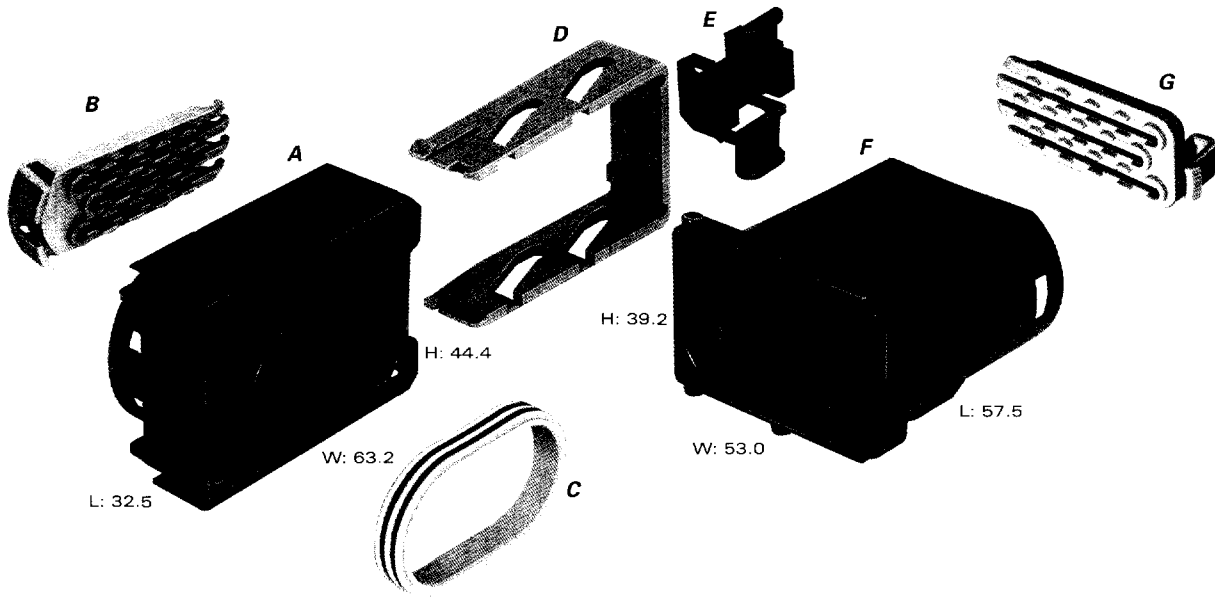
DESCRIPTION: Connector 7M (Clip Slot-Self Locking)
SIZE: 57.3L x 41.5H x 35.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

B PART NO: 12110754

DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Lt. Gray
MATERIAL: PA6

C PART NO: 12052834

DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



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Total Mated Length: 76.6mm

A PART NO: 12161186
 DESCRIPTION: Connector 15F
 SIZE: 32.5L x 44.4H x 63.2W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85

F PART NO: 12161187
 DESCRIPTION: Connector 15M (Clip Slot-Self Locking)
 SIZE: 57.5L x 39.2H x 53.0W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 85
 SEALS/PLUGS: See Page 84, 85

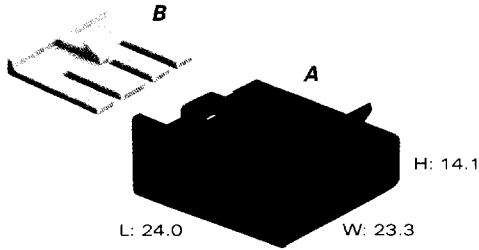
B PART NO: 12110782
 DESCRIPTION: TPA
 COLOR: Md. Gray
 MATERIAL: PA6

G PART NO: 12176865
 DESCRIPTION: TPA
 COLOR: Lt. Gray
 MATERIAL: PA6

C PART NO: 12110822
 DESCRIPTION: Connector Seal
 COLOR: Green
 MATERIAL: Silicone

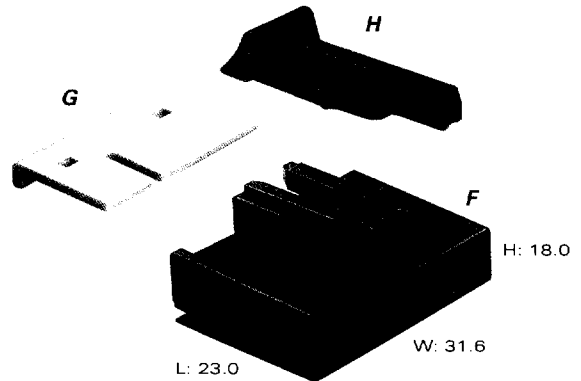
D PART NO: 12161185
 DESCRIPTION: CPA Slide Lock Assist
 COLOR: Dk. Gray
 MATERIAL: PA66 HS IM 14% GF

E PART NO: 12176640
 DESCRIPTION: Spacer Lock
 COLOR: Black
 MATERIAL: PP



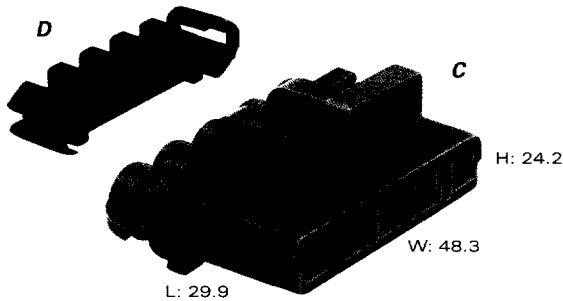
A PART NO: 12052856
 DESCRIPTION: Connector 4F
 SIZE: 24.0L x 14.1H x 23.3W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 78
 TYPICAL APP: Dimmer Switch

B PART NO: 12052857
 DESCRIPTION: TPA
 COLOR: Lt. Gray
 MATERIAL: PA6



F PART NO: 12092254
 DESCRIPTION: Connector 6F
 SIZE: 23.0L x 18.0H x 31.6W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 78
 TYPICAL APP: Wiper Switch

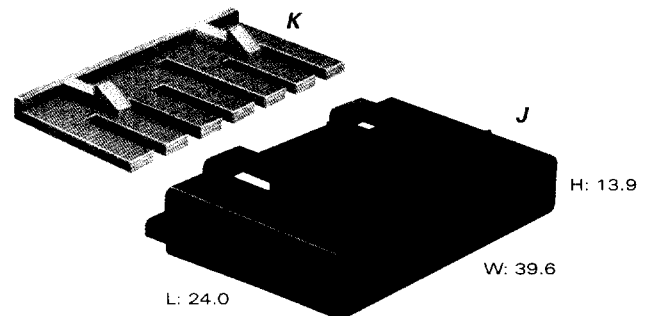
G PART NO: 12162298
 DESCRIPTION: TPA
 COLOR: Cream
 MATERIAL: PA6



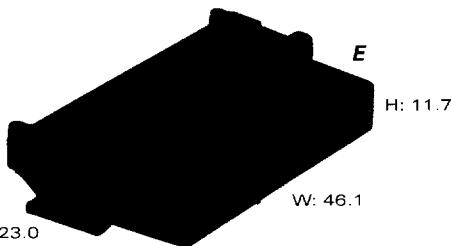
C PART NO: 12084890
 DESCRIPTION: Connector 5F
 SIZE: 29.9L x 24.2H x 48.3W
 COLOR: Md. Gray
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 78
 TYPICAL APP: Tail Lamp Module

D PART NO: 15300017
 DESCRIPTION: TPA
 COLOR: Black
 MATERIAL: PA6

H PART NO: 12052834
 DESCRIPTION: CPA
 COLOR: Green
 MATERIAL: PP

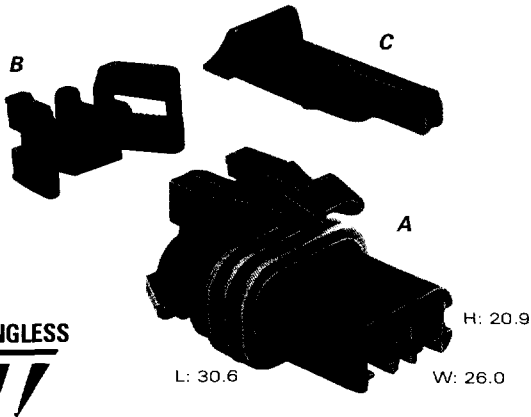


J PART NO: 12052854
 DESCRIPTION: Connector 7F
 SIZE: 24.0L x 13.9H x 39.6W
 COLOR: Black
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 78
 TYPICAL APP: Wiper Switch



E PART NO: 12041301*
 DESCRIPTION: Connector 8F
 SIZE: 23.0L x 11.7H x 46.1W
 COLOR: Black
 MATERIAL: PP
 TERMINALS: See Page 78
 TYPICAL APP: Various
 *HINGED SECONDARY LOCK.

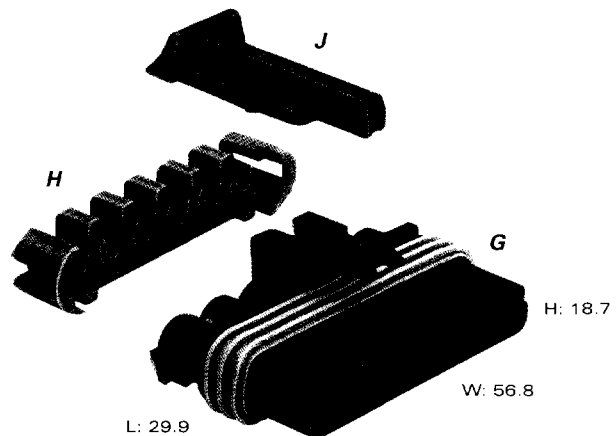
K PART NO: 12124811
 DESCRIPTION: TPA
 COLOR: Natural
 MATERIAL: PA6



A PART NO: 12129487
 DESCRIPTION: Connector Assembly 2F
 SIZE: 30.6L x 20.9H x 26.0W
 COLOR: Md. Gray
 MATERIAL: PA66 HS IM
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85
 TYPICAL APP: Window Lift Motor

B PART NO: 12077904
 DESCRIPTION: TPA
 COLOR: Blue
 MATERIAL: PA6

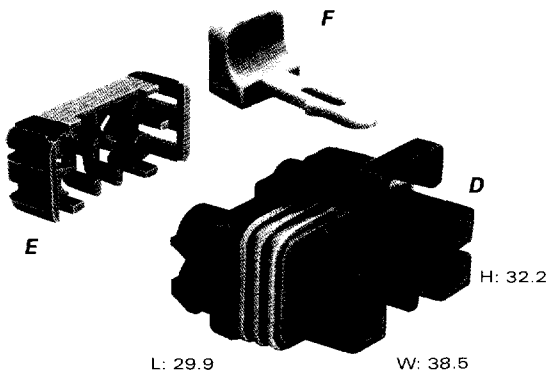
C PART NO: 12052834
 DESCRIPTION: CPA
 COLOR: Green
 MATERIAL: PP



G PART NO: 12059573
 DESCRIPTION: Connector Assembly 6F
 SIZE: 29.9L x 18.7H x 56.8W
 COLOR: Black
 MATERIAL: PA66
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85
 TYPICAL APP: Various

H PART NO: 12059195
 DESCRIPTION: TPA
 COLOR: Blue
 MATERIAL: PA6

J PART NO: 12052834
 DESCRIPTION: CPA
 COLOR: Green
 MATERIAL: PP



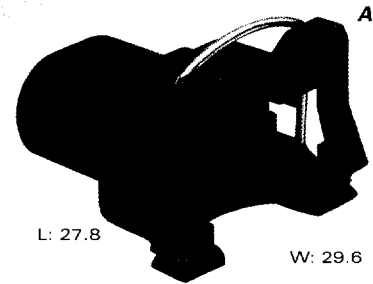
D PART NO: 12124634
 DESCRIPTION: Connector Assembly 5F
 SIZE: 29.9L x 32.2H x 38.5W
 COLOR: Black
 MATERIAL: PA6
 TERMINALS: See Page 84
 SEALS/PLUGS: See Page 84, 85
 TYPICAL APP: Wiper Switch

E PART NO: 12052816
 DESCRIPTION: TPA
 COLOR: Md. Gray
 MATERIAL: PA6

F PART NO: 12020833
 DESCRIPTION: CPA
 COLOR: Gray
 MATERIAL: PBT



Multiple Cable Seal
(Included)



- A PART NO: 12129142 (Black/Gray Seal)**
2.66 - 2.0 Cable O.D.
- PART NO: 12129140 (Black/Purple Seal)**
2.15 - 1.65 Cable O.D.
- PART NO: 12110179 (Black/Red Seal)**
1.85 - 1.47 Cable O.D.
- DESCRIPTION:** Connector Assembly 2F
- SIZE:** 27.8L x 20.0H x 29.6W
- MATERIAL:** PA66 HS 33% GF
- TERMINALS:** See Page 84
- TYPICAL APP:** Fuel Injector